

Title (en)

A RARE EARTH-ALUMINIUM/GALLATE BASED FLUORESCENT MATERIAL AND MANUFACTURING METHOD THEREOF

Title (de)

FLUORESZIERENDES MATERIAL AUF SELTENERD-ALUMINIUM/GALLAT-BASIS UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

MATÉRIAU FLUORESCENT À BASE DE TERRE RARE-ALUMINIUM/GALLATE ET SON PROCÉDÉ DE FABRICATION

Publication

EP 2565251 A1 20130306 (EN)

Application

EP 10850503 A 20100430

Priority

CN 2010072379 W 20100430

Abstract (en)

A rare earth-aluminium/gallate based fluorescent material and manufacturing method thereof are provided. Said rare earth-aluminium/gallate based fluorescent material comprises a core, and a shell which coats said core, wherein said core is a metal nanoparticle, and said shell is a fluorescent powder of chemical formula $(Y_{1-x}Ce_x)_3(Al_{1-y}Ga_y)_5O_{12}$, $0 < x \leq 0.5$, $0 \leq y \leq 1.0$. Said rare earth-aluminium/gallate based fluorescent material has a uniform particle size distribution, a stable structure, a high luminous efficiency and a high luminous strength. The manufacturing method has the following properties: a simple technique, a low demand for equipments, no pollution, easily controllable reactions, material shapes and particle sizes, and being suitable for industrial manufacture.

IPC 8 full level

C09K 11/80 (2006.01); **C09K 11/02** (2006.01)

CPC (source: EP US)

C09K 11/02 (2013.01 - EP US); **C09K 11/7774** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

EP 2565251 A1 20130306; **EP 2565251 A4 20131211**; **EP 2565251 B1 20140917**; CN 102782087 A 20121114; CN 102782087 B 20140205; JP 2013527276 A 20130627; JP 5649719 B2 20150107; US 2013153823 A1 20130620; WO 2011134170 A1 20111103

DOCDB simple family (application)

EP 10850503 A 20100430; CN 2010072379 W 20100430; CN 201080064984 A 20100430; JP 2013506442 A 20100430; US 201013643165 A 20100430